EMRO

HEALTH SYSTEM PROFILE

UNITED ARAB EMIRATES

Regional Health Systems Observatory
World Health Organization

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FOREWORD

Health systems are undergoing rapid change and the requirements for conforming to the new challenges of changing demographics, disease patterns, emerging and re emerging diseases coupled with rising costs of health care delivery have forced a comprehensive review of health systems and their functioning. As the countries examine their health systems in greater depth to adjust to new demands, the number and complexities of problems identified increases. Some health systems fail to provide the essential services and some are creaking under the strain of inefficient provision of services. A number of issues including governance in health, financing of health care, human resource imbalances, access and quality of health services, along with the impacts of reforms in other areas of the economies significantly affect the ability of health systems to deliver.

Decision-makers at all levels need to appraise the variation in health system performance, identify factors that influence it and articulate policies that will achieve better results in a variety of settings. Meaningful, comparable information on health system performance, and on key factors that explain performance variation, can strengthen the scientific foundations of health policy at international and national levels. Comparison of performance across countries and over time can provide important insights into policies that improve performance and those that do not.

The WHO regional office for Eastern Mediterranean has taken an initiative to develop a Regional Health Systems Observatory, whose main purpose is to contribute to the improvement of health system performance and outcomes in the countries of the EM region, in terms of better health, fair financing and responsiveness of health systems. This will be achieved through the following closely inter-related functions: (i) *Descriptive function* that provides for an easily accessible database, that is constantly updated; (ii) *Analytical function* that draws lessons from success and failures and that can assist policy makers in the formulation of strategies; (iii) *Prescriptive function* that brings forward recommendations to policy makers; (iv) *Monitoring function* that focuses on aspects that can be improved; and (v) *Capacity building function* that aims to develop partnerships and share knowledge across the region.

One of the principal instruments for achieving the above objective is the development of health system profile of each of the member states. The EMRO Health Systems Profiles are country-based reports that provide a description and analysis of the health system and of reform initiatives in the respective countries. The profiles seek to provide comparative information to support policy-makers and analysts in the development of health systems in EMR. The profiles can be used to learn about various approaches to the organization, financing and delivery of health services; describe the process, content, and implementation of health care reform programs; highlight challenges and areas that require more in-depth analysis; and provide a tool for the dissemination of information on health systems and the exchange of experiences of reform strategies between policy-makers and analysts in different countries. These profiles have been produced by country public health experts in collaboration with the Division of Health Systems & Services Development, WHO, EMRO based on standardized templates, comprehensive guidelines and a glossary of terms developed to help compile the profiles.

A real challenge in the development of these health system profiles has been the wide variation in the availability of data on all aspects of health systems. The profiles are based on the most authentic sources of information available, which have been cited for ease of reference. For maintaining consistency and comparability in the sources of

information, efforts have been made to use as a first source, the information published and available from a national source such as Ministries of Health, Finance, Labor, Welfare; National Statistics Organizations or reports of national surveys. In case information is not available from these sources then unpublished information from official sources or information published in unofficial sources are used. As a last resort, country-specific information published by international agencies and research papers published in international and local journals are used. Since health systems are dynamic and ever changing, any additional information is welcome, which after proper verification, can be put up on the website of the Regional Observatory as this is an ongoing initiative and these profiles will be updated on regular intervals. The profiles along with summaries, template, guidelines and glossary of terms are available on the EMRO HSO website at www.who.int.healthobservatory

It is hoped the member states, international agencies, academia and other stakeholders would use the information available in these profiles and actively participate to make this initiative a success. I would like to acknowledge the efforts undertaken by the Division of Health Systems and Services Development in this regard that shall has the potential to improve the performance of health systems in the Eastern Mediterranean Region.

Regional Director

Eastern Mediterranean Region

World Health Organization

1 EXECUTIVE SUMMARY

The United Arab Emirates (UAE) is a federation of seven Gulf sheikhdoms: Abu Dhabi, Ajman, Dubai, Fujairah, Ras al-Khaimah, Sharjah and Umm al-Qaiwain. Sheikh Khalifa bin Zayed al-Nahayan became president of the UAE and ruler of Abu Dhabi in November 2004, on the death of his father, Sheikh Zayed bin Sultan al- Nahayan, who had held both positions since the formation of the country in 1971.

UAE has seen remarkable progress in health care. Over the past years government health strategies have paid special attention to the welfare of UAE citizens who are considered to be the country's major resource and the prime target of all national development. To this end comprehensive health programs have been adopted to meet the needs of UAE society. Currently the UAE has a comprehensive, government-funded health service and a developing private health sector. This progress is clearly reflected in the positive changes in health statistics which indicate that the UAE has taken its place among the developed nations of the world.

The estimated population is 3 754 000 (2002). Average life expectancy is 73 years, males 71.3 and females 75.1 years. The majority of the population is males who represent 67.7% while females represent 32.3%, owing to the preponderance of male expatriates. 68.8% of the total population is between the ages of 15 and 49 years. Local nationals make up around 20% of the population according to the most recently available data, and demographic trends within the country are driven primarily by the emirates' reliance on foreigners to provide the workforce for their growing economy. The UAE population increased by some 86% between 1975 and 1980 following the influx of foreign workers after the 1973-74 oil boom. Some of these workers left during the 1982-83 recession but the 1985 census showed a population of 1.62m, compared with 1.04m in 1980, a 55.8% increase in five years. During the 1990s the population grew by an average of 5% a year, reaching 3.11m by 2000 an increase of almost 50% on the 1990 level. The oil-fuelled surge in economic growth over the following years has seen the UAE's total population grow at an average annual rate of 10% to just over 4m by the end of 2003, according to official Ministry of Planning figures. Recent UN estimates suggest that the UAE's population could double by 2029.

The federal government typically allocates some 25% of its total spending to education. In 2000 there were 1,050 schools catering for some 620,000 pupils. Just under two-thirds of schools are government-run, with the remainder run by a range of private-sector bodies. The overall literacy rate rose from 43% in 1975 to 77.3% in 2002, and the female adult literacy rate is slightly higher according to the UN at 80% in 2002. The higher rate for women reflects the smaller number of unskilled female expatriate workers in the emirates. No data is available for literacy rates solely among the Emirati population, but it is certain to be far higher than the overall average. This is supported by data for youth literacy (15-24 an age group that is still likely to capture a large number of expatriates), which was estimated by the UN to stand at over 90% in 2002. The government has set up education centers in remote areas, and the country now has one of the lowest pupil/teacher ratios in the world, measured at 12 pupils per teacher in 1995. Tertiary education is provided by Emirates University at Al-Ain in Abu Dhabi, 12 technical colleges and Zayed University, which has campuses in Abu Dhabi and Dubai.

The UAE has an open economy with a high per capita income and a sizable annual trade surplus. Its wealth is based on oil and gas output (about 33% of GDP), and the fortunes of the economy fluctuate with the prices of those commodities. Since 1973, the UAE has

undergone a profound transformation from an impoverished region of small desert principalities to a modern state with a high standard of living. At present levels of production, oil and gas reserves should last for more than 100 years. The government has increased spending on job creation and infrastructure expansion and is opening up its utilities to greater private sector involvement.

The UAE economy remains heavily dependent on oil and gas, despite the recent successes of the diversification efforts of some of the emirates (particularly Dubai). Abu Dhabi is by far the largest oil producer, although Dubai, and to a much lesser extent Sharjah and Ras al-Khaimah add to the UAE's overall output. Despite the importance of oil, its contribution to nominal GDP has been declining in recent years, from about 60% in 1980 to 35.8% in 1993 and an estimated 20.8% in 1998. Although the ratio rose again over the following years to around 25-30%, as there were price-driven increases in the value of oil output, this remains far below previous highs, reflecting the greater diversity of the local economy. Nevertheless, the figures understate the sector's real importance to the economy, as oil earnings are the central aspect of government income, with revenue determining the public-sector expenditure on which much of the non-oil economy directly or indirectly relies. Dubai has established itself as a centre for trade and services within the Gulf, and is building an increasingly prominent position within South Asia as a whole.

Standards of healthcare are generally high in the UAE, reflecting high levels of public spending over the decades since the oil boom. Better health provision has been reflected in rapidly improving figures for key indicators such as life expectancy and infant mortality rates, which are now at Western levels. There are some 35 public hospitals in the UAE, as well as 14 private hospitals and 128 outpatient clinics. Although several small private hospitals have been set up over the past few years, wealthy people still tend to travel abroad for medical care.

Healthcare used to be free to all, but in 2001 the government introduced charges for expatriates a move that partly sought to reduce the draw of healthcare on public funds, but also aimed to increase the cost of expatriate labor (which now requires health insurance) and thus encourage the employment of local staff. Since the policy was introduced, visits to government hospitals have fallen sharply, with some reports suggesting a 50% reduction. Although some foreign workers now have health insurance, such provision remains rare among Asian expatriates, particularly manual and semiskilled workers.

Traditionally, wealthy UAE nationals and expatriates traveled overseas for serious medical treatment. However, Dubai is currently building Dubai Healthcare City effectively a hospital free zone based on the successful Dubai Internet City model. It has attracted some of the world's leading healthcare providers, including Harvard Medical School and The Mayo Clinic from the US. It is a commercial venture that hopes to generate revenue from the UAE population, but more importantly by attracting "health tourists" from the Arab world, the Indian subcontinent and Africa.

According to the Annual Statistical Report 2002, the United Arab Emirates has 15 hospitals in urban areas, which represents 57.7% of the total number of hospitals in the country, and 11 hospitals in rural areas, which represents 42.3% of the total hospitals in the country. In addition, there are 106 primary health care centres distributed between urban and rural areas, in a proportion of 33% (35 centres) and 67% (71 centres), respectively. The Ministry of Health provides an average of one centre for every 35 415 of the population. Also, the Ministry of Health provides nationwide 11 centres for school health, which supervise 642 clinics in schools, 9 centres for preventive medicine, and 10

centres for maternity and child care. In addition, the Ministry of Health provides 92 dental clinics nationwide. The number of beds in non-private hospitals reached 4100 in 2002. It is estimated that there is one bed for every 915 people. The average bed occupancy rate for hospitals ranges from 57% to 90%.

The Ministry of Health, with comprehensive coverage to all the population, is extending its services to small communities scattered around the major settlements. The major areas of strategy in this sector are revision of the family care system, accreditation and strengthening the referral system. Almost all levels of health services are decentralized. All hospitals are either managed by medical districts or independent authorities. With rapid changes, the management of the system poses some difficulties to be addressed by the Ministry of Health.

The Ministry of Health has established a complete network of health centers and hospitals and units and thus made the service more accessible to meet the ever expanding population needs and new technologies. Curative services of the MOH are managed by the central departments at headquarters and corresponding departments in all medical districts. These departments prepare national plans and programs and supervise their implementation according to the regulations and standards set by the MOH to ensure optimal performance and adequate service.

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The Ministry of health paid special attention in recent years to preventive and promotive health by developing strategies and programs directed to mothers, under –five as well as school children and other population groups at special risk of certain health problems. Special programs have also been developed to cater for the prevention and control of infectious diseases in general and imported diseases and occupational health problems in particular. Health education is also given special attention to raise awareness and promote healthy behavior among the public.

The ministry of Health has paid special attention to health education as an effective method for changing unfavorable attitudes and behavior that would negatively influence the health and well-being of individuals and the community at large. To meet this challenge, the ministry established a department of health education under the preventive health sector with representation in all medical districts. The departments' responsibility is to develop national plans to raise the awareness of the public on all matters pertaining to their health and well- being. The implementation of these plans in the form of programs and specific activities is supervised by the department.

The Pharmacy and supplies includes a number of departments and sections that deal with different functions of this important sector. These departments and sections work in harmony to provide all MOH institutions with their needs of pharmaceuticals and drugs after ensuring that such products are safe and superior quality and safe.

2 SOCIO ECONOMIC GEOPOLITICAL MAPPING

2.1 Socio-cultural Factors

Table 2-1 Socio-cultural indicators

Indicators	1990	1995	2000	2002
Human Development Index:	0.812	0.814	-	0.849
Literacy Total:	71.04	73.44	76.20	77.26
Female Literacy:	70.57	74.66	79.12	80.67
Women % of Workforce	11.6	13.1	14.8	15.86
Primary School enrollment	104.33	90.75	90.63	-
% Female Primary school pupils	48.16	48.11	47.98	-
%Urban Population	82.78	83.72	84.61	84.96

Source: UNDP http://hdr.undp.org/statistics/data/indicators.cfm?x=15&y=1&z=1

The total population of UAE is 4.041 million out of which only 15-20% are UAE citizens. The rest include significant numbers of other Arabs--Palestinians, Egyptians, Jordanians, Yemenis, Omanis--as well as many Iranians, Pakistanis, Indians, Bangladeshis, Afghanis, Filipinos, and west Europeans.

The majority of UAE citizens are Sunni Muslims with a small Shi'a minority. Most foreigners also are Muslim, although Hindus and Christians make up a portion of the UAE's foreign population.

The Government allocated all necessary funds to ensure good education for all citizens. The number of students increased from 481 thousand in 1995 to 564.1 thousand in 2000. The male (10 years and over) illiteracy rate is estimated at about 18.4% (1995), while the female (10 years and over) illiteracy rate is estimated at about 12.1% (1995). Dropouts from school still represent a problem, nonetheless, the number of dropouts decreased from 3.7% in 1995 to 1.9% in 2000. The United Arab Emirates is recognized for its great emphasis on and remarkable programme for abolishment of illiteracy for all citizens in general, and the elderly in particular.

Educational standards among UAE citizens population are rising rapidly. Citizens and temporary residents have taken advantage of facilities throughout the country. The UAE University in Al Ain had roughly 16,000 students in 2000. The Higher Colleges of Technology, a network of technical-vocational colleges, opened in 1989 with men's and women's campuses in each emirate. Zayed University for women opened in 1998 with campuses in Abu Dhabi and Dubai. The federal government typically allocates some 25% of its total spending to education. In 2000 there were 1,050 schools catering for some 620,000 pupils. Just under two-thirds of schools are government-run, with the remainder run by a range of private-sector bodies. The overall literacy rate rose from 43% in 1975 to 77.3% in 2002, and the female adult literacy rate is slightly higher according to the UN at 80% in 2002. The higher rate for women reflects the smaller number of unskilled female expatriate workers in the emirates. No data is available for literacy rates solely among the Emirati population, but it is certain to be far higher than

the overall average. This is supported by data for youth literacy (15-24 an age group that is still likely to capture a large number of expatriates), which was estimated by the UN to stand at over 90% in 2002.

The government has set up education centers in remote areas, and the country now has one of the lowest pupil/teacher ratios in the world, measured at 12 pupils per teacher in 1995. Tertiary education is provided by Emirates University at Al-Ain in Abu Dhabi, 12 technical colleges and Zayed University, which has campuses in Abu Dhabi and Dubai.

2.2 Economy

Key economic trends, policies and reforms

The UAE has an open economy with a high per capita income and a sizable annual trade surplus. Its wealth is based on oil and gas output (about 33% of GDP), and the fortunes of the economy fluctuate with the prices of those commodities. Since 1973, the UAE has undergone a profound transformation from an impoverished region of small desert principalities to a modern state with a high standard of living. At present levels of production, oil and gas reserves should last for more than 100 years. The government has increased spending on job creation and infrastructure expansion and is opening up its utilities to greater private sector involvement.

The UAE economy remains heavily dependent on oil and gas, despite the recent successes of the diversification efforts of some of the emirates (particularly Dubai). Abu Dhabi is by far the largest oil producer, although Dubai, and to a much lesser extent Sharjah and Ras al-Khaimah add to the UAE's overall output. Despite the importance of oil, its contribution to nominal GDP has been declining in recent years, from about 60% in 1980 to 35.8% in 1993 and an estimated 20.8% in 1998. Although the ratio rose again over the following years to around 25-30%, as there were price-driven increases in the value of oil output, this remains far below previous highs, reflecting the greater diversity of the local economy. Nevertheless, the figures understate the sector's real importance to the economy, as oil earnings are the central aspect of government income, with revenue determining the public-sector expenditure on which much of the non-oil economy directly or indirectly relies.

Dubai has established itself as a centre for trade and services within the Gulf, and is building an increasingly prominent position within South Asia as a whole, with its importance now extending as far as the southern republics of the former Soviet Union as well as the Red Sea states of East Africa. Re-exports are the mainstay of the trading system. The value of UAE's recorded re-exports in 2002 was around US$13.9bn (28% of total exports), but the figure is almost certainly an understatement of the sector's true value, as a substantial proportion (estimated at as much as 40% by some sources) is unrecorded. Dubai accounts for around 85% of the UAE's re-exports.

Table 2-2 Economic Indicators

Indicators	1990	1995	2000	2002
GNI per Capita (Atlas method)current US$	19,930	19,930	-	*18,060
GNI per capita(PPP) Current International	22,340	20,610	22,290	21,040
GDP per Capita	19,634	17,105	19,050	17,520

GDP annual growth %	8.73	3.63	7.38	-4.97
Unemployment %	-	1.8	2.3	-
External Debt as % of GDP	-	-	-	-
Trade deficit:	-	-	-	-

Source: * UNICEF 2004

Table 2-3 Major Imports and Exports

Major Exports:	Crude oil 45%, natural gas, re-exports, dried fish, dates
Major Imports	Machinery and transport equipment, chemicals, food

Source: http://www.cia.gov/cia/publications/factbook/geos/ae.html

2.3 Geography and Climate

The United Arab Emirates (UAE) is a union of seven Sovereign Sheikhdoms - six of which Abu Dhabi, Dubai, Sharjah, Fujairah, Umm Al Quwain and Ajman - formed the present federation in 1971 when the British withdrew from the Gulf as part of the 'East of Suez' policy. Ras Al Khaimah joined a year later.

Map of U.A.E

The total area of the UAE is approximately 77,700 square kilometers. The largest emirate, Abu Dhabi, accounts for 87 percent of the UAE's total area (67,340 square kilometers). The smallest emirate, Ajman, encompasses only 259 square kilometers. The

UAE stretches for more than 650 kilometers along the southern shore of the Persian Gulf. Most of the coast consists of salt pans that extend far inland. The largest natural harbor is at Dubayy, although other ports have been dredged at Abu Dhabi, Sharjah, and elsewhere. The UAE also extends for about ninety kilometers along the Gulf of Oman, an area known as the Al Batinah coast.

South and west of Abu Dhabi, vast, rolling sand dunes merge into the Rub al Khali (Empty Quarter) of Saudi Arabia. The desert area of Abu Dhabi includes two important oases with adequate underground water for permanent settlements and cultivation.

The climate of the UAE generally is hot and dry. The hottest months are July and August, when average maximum temperatures reach above 48° C on the coastal plain. In the Al Hajar al Gharbi Mountains, temperatures are considerably cooler, a result of increased altitude. Average minimum temperatures in January and February are between 10° C and 14° C. During the late summer months, a humid southeastern wind known as the sharqi makes the coastal region especially unpleasant. The average annual rainfall in the coastal area is fewer than 120 millimeters, but in some mountainous areas annual rainfall often reaches 350 millimeters. Rain in the coastal region falls in short, torrential bursts during the summer months, sometimes resulting in floods in ordinarily dry wadi beds. The region is prone to occasional, violent dust storms, which can severely reduce visibility

2.4 Political/ Administrative Structure

Basic political /administrative structure and any recent reforms

The UAE is a federation of seven Gulf sheikhdoms. Between 1971 and 1996 the UAE operated under a provisional constitution, which was renewed every five years. In 1996 the seven emirates agreed to make the constitution permanent, and accepted Abu Dhabi city as their capital. The Supreme Council is the highest federal authority and comprises the hereditary rulers of the seven emirates. It has the power to decide policy, elect the federal president and his deputy, admit new members to the federation, and appoint and dismiss the prime minister and the judges of the Federal Supreme Court. It also ratifies federal laws, although the president can amend them. The council meets formally once a year, but informal meetings are more frequent. All council decisions must be approved by Abu Dhabi and Dubai and at least three other emirates.

The UAE's head of state is the president, elected by, and from, the Supreme Council of Rulers. Although it is not formally stated in the constitution, the head of state is always the leader of Abu Dhabi. Sheikh Zayed, the then ruler of Abu Dhabi, was elected for a seventh five-year term as president of the UAE in 2001. The council unanimously elected Sheikh Khalifa as his successor following Sheikh Zayed's death in November 2004. The head of state is also commander-in-chief of the armed forces.

The Supreme Council also elects the Council of Ministers, an executive body (cabinet) headed by the prime minister, currently Sheikh Maktoum, the ruler of Dubai. Sheikh Maktoum is also vice-president, a post that, like the presidency, is elected by the Supreme Council for a renewable five-year term. Since 1979, both the vice-presidency and the post of prime minister have been held by the ruler of Dubai-a tradition that is unlikely to change. [1]

3 HEALTH STATUS AND DEMOGRAPHICS

3.1 Health Status Indicators

Standards of healthcare are generally high in the UAE, reflecting high levels of public spending over the decades since the oil boom. Better health provision has been reflected in rapidly improving figures for key indicators such as life expectancy and infant mortality rates, which are now at Western levels.

Table 3-1 Indicators of Health status

Indicators	1990	1995	2000	2002	2004
Life Expectancy at Birth:	73.53	76.4	78	78.1	79.3
HALE:	-	-	62.4	-	-
Infant Mortality Rate:	11.4	10.01	8.08	8.12	8.71
Probability of dying before 5th birthday/1000:	14.4	12.69	10.27	10.19	10.58
Maternal Mortality Ratio:	30	03	0	0	0
Percent Normal birth weight babies	-	-	95	91.8	92.9
Prevalence of stunting/wasting	-	14	-	-	-

Source: Statistics section- Ministry of health 2005

Table 3-2 Indicators of Health status by Gender and by urban rural

Indicators	Urban	Rural	Male	Female
Life Expectancy at Birth:	-	-	70.8	75.8
HALE:	-	-	61.7	63.3
Infant Mortality Rate:	-	-	-	-
Probability of dying before 5th birthday/1000:	-	-	-	--
Maternal Mortality Ratio:	-	-	-	-
Percent Normal birth weight babies:	-	-	-	-
Prevalence of stunting/wasting:	-	-	-	-

Source:

Table 3-3 Top 10 causes of Mortality/Morbidity

Rank	Mortality	Morbidity/Disability
1.	Cardiovascular diseases	
2.	Accidental injuries	
3.	Cancer	
4.	Congenital anomalies	
5.	Diabetes Mellitus	
6.		
7.		
8.		
9.		
10.		

Source: Measuring health of the nation. United Arab Emirates health & lifestyle survey 2000

Morbidity and mortality trends

Maternal and child health

Changes in the provision and impact of health services are reflected by a number of key indicators as estimated in 2002: infant mortality rate 8.12, neonatal mortality rate 5.5, under-five mortality rate 10.1 and maternal mortality ratio 0.0 (2003). The low mortality rates are mainly due to excellent maternal health services and facilities and attendance of 98% of deliveries by trained health personnel. Figures for the level of contraceptive use in the United Arab Emirates are unavailable.

The strategies recommended by WHO have resulted in an eradication of poliomyelitis. United Arab Emirates is still working towards the elimination of measles and expects a favourable chance of achieving elimination by 2005 due to the high coverage rates with measles vaccine (at about 96%) and the significant reduction in measles incidence.

The incidence of the other immunizable childhood diseases has sharply declined due to sustaining maximum immunization coverage, and continuing provision of relevant information to the public through organized health education activities. Rubella has been recorded for many years and reported cases have been declining steadily.

HIV/AIDS and other sexually transmitted diseases

According to WHO, United Arab Emirates and neighbouring countries have among the lowest number of reported HIV/AIDS cases in the world. Cultural, social and behavioural norms may have contributed to keeping infection at these low levels. However, another contributing factor is the AIDS control programme, one of the first of its kind in the Region. The programme was initiated in the late 1980s and concentrated on early case detection (by including all expatriates entering the country for work, or renewal of visa, all new marrying males, on university entrance, employment or army recruitment, etc.), follow-up of patients for counselling and compliance, health education campaigns and other strategies.

The number of reported cases of syphilis was 560, gonorrhoea 117 and other sexually transmitted diseases 43 in 2003.

Communicable diseases

Communicable diseases still pose a problem to the United Arab Emirates despite the fact that the incidence of many communicable diseases has declined sharply in recent years. Plans are still ongoing to control, eliminate and/or eradicate such diseases in the country. Viral hepatitis, tuberculosis and meningococcal meningitis are still considered an important public health problem. The United Arab Emirates is free of malaria transmission. A comprehensive strategy for the control of malaria was undertaken in collaboration with partners, such as municipalities, Ministry of Agriculture and the private health sector. There are still sporadic cases of typhoid fever and leprosy. The reported leprosy cases are predominantly imported and cases detected by the national screening programme are immediately deported.

Non-communicable diseases

The main non-communicable diseases are cardiovascular diseases, cancers, diabetes and chronic obstructive pulmonary diseases. In recent years non-communicable diseases, notably cardiovascular diseases, cancers and diabetes, as well as accidents, have been the leading causes of mortality (Table 3).

Table 3. Major causes of mortality

Cause	Percent
Cardiovascular diseases	28.69
Road traffic accidents	15
Cancers	8.6
Congenital anomalies	4.68
Diabetes mellitus	2–3

Source: *Ministry of Health strategic plan (2000–2010)*, United Arab Emirates, Ministry of Health, 2000.

Cardiovascular diseases. In the absence of a cardiovascular disease registry and/or reliable morbidity statistics, it may be difficult to draw firm conclusions on cardiovascular diseases morbidity. However, national data strongly indicate that cardiovascular diseases continue to be the leading cause of death with acute myocardial infarction representing 28%, cerebrovascular disease 16.2%, hypertensive disease 13.0%, and ischaemic heart disease 12.3% of mortality from cardiovascular diseases. Deaths due to cardiovascular diseases are reported among more males than females across all age groups. In addition, over 90% of such deaths occur over the age of 45 years. The Ministry of Health is working towards a well defined prevention and control plan for cardiovascular diseases.

Accidents are a major health problem. They have been ranked as the second leading cause of death in the country. In 2003, 1014 deaths were attributed to accidents. The predominant cause of death was road traffic accidents, which accounted for 70.5% (620 cases) of all accidental deaths. Males accounted for 88.5% of these deaths.

Cancer is the third leading cause of death accounting for 468 deaths in 2000, or 8.6% of total deaths. In 2003, it accounted for 525 deaths. Cancer trends closely follow global trends. Cancers of the lung and breast are the leading cancers among males and females, respectively. Stomach cancer is the second most common cancer in males compared with cervical cancer in females. The United Arab Emirates has cancer control and prevention activities (Table 4).

Table 4. Cancer control programmes

Breast cancer screening programme
Early detection of cervical cancer
Early detection of colorectal cancer
Early detection of prostate cancer

Source: Ministry of planning website (www.uae.gove.ae/mop), United Arab Emirates.

Congenital anomalies have ranked as the fourth leading cause of death in recent years. The number of reported deaths in 2003 was 274, which represents 4.68% of all deaths. Deaths among children below 15 years constituted 90% of all congenital anomalies deaths.

Diabetes mellitus is a significant cause of mortality and morbidity. Deaths attributed to diabetes accounted for 2–3% of all deaths in the past 10 years. Almost all deaths were reported among persons 45 years and older. The number of reported cases in 2003 was 175. A recent joint WHO/United Arab Emirates study, showed that the prevalence of diabetes is approximately 17%, and this could serve as a preliminary baseline on which to build a solid database to guide the national plan.

2.3.6 Lifestyle and environmental factors

Tobacco consumption still poses a problem. According to a recent study, 24.3% of males aged 13–15 years were current smokers, 42% of males aged 17 years were current smokers, and 20% of adult males were current smokers. Female current smokers aged 13–15 years represented 2.9%, while adult females represented <1.0%. Shisha (argelie) is widespread and daily use has significant health implications. The United Arab Emirates has an anti-tobacco programme which has four components: legislation, smoking cessation units, a community-based component, and a school-based component.

3.2 Demography

Demographic patterns and trends

Table 3-4 Demographic indicators

Indicators	1990	1995	2000	2004
Crude Birth Rate per 1000 pop	28.2	20.6	17.6	14.6
Crude Death Rate per 100 pop	2.1	2.03	1.75	1.42
Population Growth Rate %	12.9	6.61	5.79	6.9
Dependency Ratio %	48.1	37.9	36.2	35.5
% Population <15 years	34.9	26.17	26.16	25.3
Total Fertility Rate:	4.05	3.27	2.73	2.23

Source: Statistics section- Ministry of health 2005

Table 3-5 Demographic indicators by Gender and Urban rural

Indicators	Urban	Rural	Male	Female
Crude Birth Rate:				
Crude Death Rate:				
Population Growth Rate:				
Dependency Ratio:				
% Population <15 years				
Total Fertility Rate:				

Source:

The population of the United Arab Emirates was reported to have been only 180,000 people in 1968. By 1975, the population numbered 557,000; it doubled by 1980 to about 1 million and to 1.48 million by 1986. The overall increase is 16- folds in 33 years over this period. More recently, the population continued to increase by 24 % between 1995 and 1999. This increase is predominantly due to the continuing inflow of expatriates, a tide that has been continuing since 1968. However, this veils the fact that the some close to 52,000 annual live births are related to a far smaller population base than the total population of some 2.94 million, since many of the expatriate population has a single status in the UAE; their births are noted elsewhere in the country of origin. If we consider only the total born to nationals in 1999, namely 21,638 lives, over their relative representation in the population (20%), we would obtain an annual natural increase for the national population of some 3.68%, a number far more likely to represent the true state and is at par with the population increase in neighboring states.

Over eighty percent of the UAE's population resides in the cities of Abu Dhabi, Al Ain, Dubai, and Sharjah. The population includes a large number of expatriates who come primarily from other countries of the Middle East, as well as from India, Pakistan, and the Far East. The Emirate of Dubai registered 13,026 births in the year 2000, with 97 stillbirths. Newborns to Nationals numbered close to 5,000 births or about 38% of the total number of births. Births to Nationals in the UAE amounted to 42% of the total births.

The expatriate population is young. Most foreigners are employed as construction workers or laborers. They are usually recruited in their early twenties and many return home as soon as they have saved enough to establish a household. The average age of construction workers and laborers is about 30 years, according to the World Bank Mission report (1997). Because evidence of good health must be provided in order to obtain a residency permit, the group is exceptionally healthy as well. It is to be noted that all applicants for residency permits, whether new or up for renewal, are required to obtain a medical fitness certificate from the department of preventive medicine. The certification does not involve usually a thorough evaluation, while dependents under the age of 18 years are not subjected to any medical screening. However, all adult applicants must undertake the screening test for HIV.

Local nationals make up around 20% of the population according to the most recently available data, and demographic trends within the country are driven primarily by the emirates' reliance on foreigners to provide the workforce for their growing economy. The UAE population increased by some 86% between 1975 and 1980 following the influx of foreign workers after the 1973-74 oil boom. Some of these workers left during the 1982-

83 recession but the 1985 census showed a population of 1.62m, compared with 1.04m in 1980, a 55.8% increase in five years. During the 1990s the population grew by an average of 5% a year, reaching 3.11m by 2000 an increase of almost 50% on the 1990 level. The oil-fuelled surge in economic growth over the following years has seen the UAE's total population grow at an average annual rate of 10% to just over 4m by the end of 2003, according to official Ministry of Planning figures. Recent UN estimates suggest that the UAE's population could double by 2029.

The estimated population is 3 754 000 (2002). Average life expectancy is 73 years, males 71.3 and females 75.1 years. The majority of the population are males who represent 67.7% while females represent 32.3%, owing to the preponderance of male expatriates. It is remarkable that 68.8% of the total population are between the ages of 15 and 49 years (Table 1). The United Arab Emirates administratively comprises seven emirates: Abu Dhabi, Dubai, Ras al-Khaimah, Sharjah, Ajman, Umm al-Quwain and Fujairah. The city of Abu Dhabi is the capital (Table 2).

Table 1. Demographic and socioeconomic indicators

Demographic indicators	Value	Year
Population	3.754 million	2002
Annual population growth rate (%)	1.39	2002
Total fertility rate	3.29 children/woman	(2000 est.)
Average life expectancy (total)	73	2002
Infant mortality rate	8.1	2002
Maternal mortality ratio	0.0	2002
Crude death rate	1.56	2002
Crude birth rate	15.48	2002
Still birth rate	7.14	2002
Male illiteracy rate (%) (10 years and over)	18.4	1995
Female illiteracy rate (%) (10 years and over)	12.1	1995
Per capita GDP at exchange rate (US$)	25 614	2002
Total expenditure on health per capita (US$)	767	2001

Source: *Annual statistical report*, United Arab Emirates, Ministry of Health, 2002.

Table 2. Population of individual Emirates

Emirate	Population
Abu Dhabi	1 470 000
Dubai	1 112 000
Sharjah	599 000
Ajman	215 000
Umm al-Quwain	59 000
Ras al-Khaima	187 000
Fujairah	112 000

Source: *Annual preventive medicine report*, United Arab Emirates, Ministry of Health, 2000.

4 HEALTH SYSTEM ORGANIZATION

4.1 Brief History of the Health Care System

In the years before the discovery of oil, the health situation in the emirates was poor. Those who could afford it obtained modern treatment abroad; those who could not had to make do with traditional remedies. Britain became interested in the region's welfare when it perceived that the United States would gain local influence in the scramble for oil through the successes of United States missionary doctors, who, in Muscat and Bahrain, operated the only hospitals in the region. As a result, in 1938 Britain appointed a medical officer for the Trucial Coast and sent an Indian physician to serve in a dispensary in Dubayy the following year.

In 1949 the British government built Al Maktum Hospital, a small hospital in Dubayy, and appointed a British physician from the Indian Medical Service to initiate modern medical service. Contributions to health care also came from Kuwait, Iran, and the Trucial States Development Fund. Earlier suspicions by the British notwithstanding, in the 1950s and 1960s American Mission hospitals were established in Sharjah, Al Ayn, and Ras al Khaymah.

In 1965 the Abu Dhabi government employed one physician; three others were in private practice. The emirate also received technical and material assistance from Egypt. After federation in 1971, rapid growth but a lack of coordination characterized the health system. Although cooperation in the health field among emirates had improved by the early 1990s, oil companies and the military continued to have their own medical facilities.

All residents received free medical care until 1982. In that year, escalating costs, shrinking oil revenues, and a change in attitude toward foreign residents caused the UAE to begin charging noncitizens for all services except emergency and child and maternity care. In 1985 there were 2,361 physicians, 6,090 nurses, 242 dentists, and 190 pharmacists, almost all of whom were foreigners. In 1986 the UAE had forty public hospitals with 3,900 beds and 119 clinics. In 1990 life expectancy at birth was 68.6 years for males and 72.9 years for females. The major causes of death registered in Abu Dhabi in 1989 per 100,000 population were accidents and poisonings, 43.7; cardiovascular diseases, 34.3; cancer, 13.7; and respiratory diseases, 8.1. As of December 1990, eight cases of acquired immune deficiency syndrome (AIDS) were reported in the UAE. Infant mortality declined dramatically from 103 per 1,000 live births in 1965 to twenty-three per 1,000 live births in 1990. In 1985 a health worker attended 96 percent of births.

In the early 1990s, the UAE had a modern health care system with facilities and professionals capable of providing excellent care and performing advanced procedures such as organ transplants and complex heart surgery. Although facilities are concentrated in the cities of Abu Dhabi and Dubayy, most of the population has access to at least basic facilities. The federation's first hospital specializing in pediatric and maternity care, the 374- bed Al Wasl Hospital in Dubayy, opened in the late 1980s. The New Medical Centre in Abu Dhabi, a private facility, is equipped to treat diving accidents. Most hospitals are run by the government[2].

Public Health expenditure in Dubai has increased from £274 million in 1990 to £452 million in 2000. The number of hospital beds has increased from 1421 in 1990 to 2048 in

2000. There are plans for 17 new Federal Hospitals, more Private and DOHMS hospitals, and the number of beds is set to increase to more than 8,700 beds, one bed for every 300 people, during the next decade[3].

4.2 Public Health Care System

Organizational structure of public system

The sharp increase and wide distribution of the population in UAE following the vast socio-economic development in the last 3 decade made it imperative for the MOH to seek a more decentralized strategy for providing health services. Article 36 of the Council of Ministers Order No (11) of 1989 concerning the organizational structure of the ministry stipulates that the 9 medical districts be established so that each district have administrative and technical capacity to plan, organize, supervise and develop its own health care services. The administrative set-up at the district level represents all sectors of the ministry in the form of corresponding departments and sections.

The Government of Dubai administers its own Department of Health and Medical Services (DOHMS), which is independent of the Federal UAE Ministry of Health administered from Abu Dhabi. The Federal Ministry of Health (FMH) is responsible for healthcare across the UAE, and operates hospitals in all the Northern Emirates. The DOHMS is responsible for three hospitals and 18 health centres, the Federal Ministry for two hospitals in Dubai, and seven more in the other Northern Emirates. There are five private hospitals and 286 private medical centres, general and dental clinics in Dubai.

Curative services received special attention by the state in recent years. These services have been developed through well planned strategies, setting specific and precise national performance standards and supporting the facilities with modern equipment. The Ministry of Health has established a complete network of health centers and hospitals and units and thus made the service more accessible to meet the ever expanding population needs and new technologies. Curative services of the MOH are managed by the central departments at headquarters and corresponding departments in all medical district. These departments prepare national plans and programs and supervise their implementation according to the regulations and standards set by the MOH to ensure optimal performance and adequate service. These departments include:

The Department of Planning and Computers:

The department of planning is responsible for the development and formulation of national health policies before submitting them to the responsible authorities for final approval. The department has a number of sections that include:

Section of Statistics: This is formed of a central unit and focal points of statisticians in all medical districts, hospitals, centers and other departments. The responsibility of this section is to collect and analyze data from all these outlets, derive relevant indicators and publish periodical reports that guide the planning process.

Computer center: which was established in 1993 to facilitate the development of information systems and upgrade them to improve the performance of all health institutions. The center has already introduced among other things, new systems for the medical stores, registration of births & deaths, health cards, blood banks and other systems for hospitals, and licensing in addition to the procurement and distribution of computers.

Administrative Development Unit: This works towards establishing the basis and improving administrative capabilities by adopting effective and modern managerial methods. The responsibilities of this unit as stated in the council of ministers decree number 11 of 1989, include the planning and preparation of health manpower development systems and a system capable of dealing with problems and finding solutions that would simplify the administrative process in the ministry and facilitate the accurate estimation of the training needs. The unit has already conducted more than 85 training sessions for more than 600 participants in the year 2000 in cooperation with relevant public and private sectors.

Department of primary Health Care (PHC)

The UAE was one of the first countries that adopted PHC after signing the Alma Ata declaration and started introducing the service in 1984. Health centers gradually replaced clinics to provide basic medical care in addition to dental care. Other services such as maternal and child health including antenatal care, vaccination, and nutrition education are also provided. The number of health centers increased gradually to reach 106 centers by the year 2000 distributed in all medical districts. The large number of attendants of PHC centers who exceeded 4.5 millions in 2000, reflect clearly the extent of utilization of these centers.

Department of Nursing:

The department of nursing is responsible for the provision of quality nursing to meet the needs of all patients in health institutions in the country for This important service – the department is also responsible for developing these sources through continuous supervision and evaluation in addition to the training of nurses to provide them with the necessary skills to undertake their duties as specified in the national nursing policy

The department has been expanded in recent years and currently has seven sections that include planning and administration, training, continuing education, informatics as well as research and development, naturalization of the profession, registration and quality assurance. The department has gone a long way in terms of the planning and implementation of different nursing programs, development and publication of nursing regulations and policies. In addition, the department of nursing contributes positively to the celebration of international, regional and national occasions. A national nursing association to the nurse's welfare has also been established recently. During the last 3 decades, the number of nurses in the ministry of health has increased from 1902 in 1977 to 6423 in 2000

Department of Dentistry:

The number of dentists, reached 777 in 2000 (227 in the public sector and 550 in the private sector) with an increase of 15% to that recorded in 1995.

Dental services are provided at 3 levels:

1. Comprehensive dental and oral health care provided at 72 units located in PHC centers and school health clinics.
2. Specialized dental services provided in 8 dental centers in the medical districts.
3. Specialized hospital dental services

Key organizational changes over last 5 years in the public system, and consequences

Healthcare used to be free to all, but in 2001 the government introduced charges for expatriates a move that partly sought to reduce the draw of healthcare on public funds, but also aimed to increase the cost of expatriate labor (which now requires health insurance) and thus encourage the employment of local staff. Since the policy was introduced, visits to government hospitals have fallen sharply, with some reports suggesting a 50% reduction. Although some foreign workers now have health insurance, such provision remains rare among Asian expatriates, particularly manual and semiskilled workers.

Traditionally, wealthy UAE nationals and expatriates traveled overseas for serious medical treatment. However, Dubai is currently building Dubai Healthcare City effectively a hospital free zone based on the successful Dubai Internet City model. It has attracted some of the world's leading healthcare providers, including Harvard Medical School and The Mayo Clinic from the US. It is a commercial venture that hopes to generate revenue from the UAE population, but more importantly by attracting "health tourists" from the Arab world, the Indian subcontinent and Africa.

4.3 Private Health Care System

Modern, for-profit

The private sector has developed in recent years to become an important partner in providing comprehensive health care to the people of the UAE. It is now contributing effectively to curative, preventive and promotive services through the hospitals, polyclinics and diagnostic and medical centers and private clinics.

Although most of these institutions are found in urban areas and major cities they carry formidable proportion of health provision which reduces the burden on the Ministry of Health facilities. Private health institutions have reached 869 in the year 2000 distributed as follow: Modern concepts for health care provision as initiated and recommended by WHO and other health related international agencies, are closely adhered to and used to guide prospective national policies and strategic plans adopted by the Ministry of Health in UAE. [4]

Private Medical Institutions in 2000

Medical Institutions	No.
Hospitals	87
Health Centers	186
Speciality Clinics	187
General Clinics	213
Clinics	181
Diagnostic Centers	35
Total	**869**

(Source: UAE Health Directory 2002-2003)

The private sector is diverse, unorganized and largely unregulated, according to the World Bank Mission, 1997. Private clinics and hospitals are usually found in most urban centers. Private health care facilities must be owned by a UAE national and must meet minimum standards set by the Ministry of Health. The quality of the facilities and services is highly variable. Estimates have put the number of visits to the private sector at 3.8 millions per year. It appears that there is a market for fee-for-service private medical care amongst UAE nationals and the upper middle class of expatriates who have the resources (personal or insurance) and who are frustrated by the long waiting lines and limited working hours in governmental facilities. Many are also willing to pay to receive services from personal physicians whom they trust and feel comfortable with their services. The recent introduction of health cards by the Ministry of Health has also contributed to the growth of the private sector.

4.4 Overall Health Care System

Brief description of current overall structure

The most significant feature of health care in UAE is the pivotal role of the Ministry of Health in evolving a comprehensive system capable of rationalizing the contribution of all institutions providing health services in the country and directing such input to making quality health care comparable to that of the most developed countries available and accessible by the people of the UAE. The Ministry of Health has also taken the responsibility of establishing national standards to control the quality and guide health care provision to meet the aspirations and needs of the beneficiaries.

UAE has seen remarkable progress in health care. Over the past years government health strategies have paid special attention to the welfare of UAE citizens who are considered to be the country's major resource and the prime target of all national development. To this end comprehensive health programs have been adopted to meet the needs of UAE society. Currently the UAE has a comprehensive, government-funded health service and a developing private health sector. This progress is clearly reflected in the positive changes in health statistics which indicate that the UAE has taken its place among the developed nations of the world. In fact, the latest United Nations Human Development Report released in July 1999 ranked the UAE 43rd out of 174 industrial and developing countries, up five places from the previous year.

Health care infrastructure has kept pace with other health care developments to ensure that adequate services are provided in the Emirates. In 1971 there were only seven hospitals and 700 beds in the UAE. By year 2000 the number of hospitals has risen to 51, the number of physicians has also risen to 1,535 and nursing staff to 4,664. The number of clinics and health centers has also increased from 21 to 115 well equipped modern centers. Thirty of the hospitals with 4,496 patient beds are run by the Ministry of Health (MOH). Four hospitals with 1,524 beds are run by Dubai's Department of Health and Medical Services (DOMS). The Department of Defense runs 4 hospitals. Moreover, there are 3 private non-profit hospitals with 148 beds, 21 privately owned hospitals with 827 beds, 1,019 privately owned clinics, and 1 hospital with 36 beds run by Abu Dhabi National Oil Company (ADNOC). These hospitals are furnished with the latest medical equipment.

The Government plans for expansion and upgrading of its health care system is ongoing. The construction of 17 public hospitals including extensions to existing hospitals will add 1,800 beds in various medical outlets, nearly doubling the bed capacity of public hospitals in the UAE over the next 10 years.

Years		1970	1980	1990	2000
Population		580,000	1,040,000	1,844,000	3,108,000
Hospitals		7	20	29	30
Hospital Beds	Total	700	3000	4300	4473
	Pop./Bed	1/1500	1/3500	1/4200	1/6900
Health Centers		21	65	90	115
Physicians	Total	200	1000	1500	2350
	Pop./phys	1/2900	1/932	1/1230	1/1322
Nurses	Total	1000	3300	4600	6300
	Pop./Nurse	1/580	1/315	1/400	1/490

Source: http://www.moh.gov.ae/moh_site/others/health_services.htm

5 GOVERNANCE/OVERSIGHT

5.1 Process of Policy, Planning and management

National health policy, and trends in stated priorities

The Ministry of Health (MOH) has adopted this principle in providing accessible and quality comprehensive health services since the early days of the Federation in 1971. Primary Health Care was a fundamental starting point for a compatible preventive and curative community-based service in the country.

Accordingly, the MOH has developed national strategies that incorporated the political and socio-economic status and which emphasized on international and regional collaboration with respected agencies and academic institutions. The main theme of this strategy is evident through the provision of comprehensive care, increasing life expectancy, the continuing efforts to eradicate communicable and parasitic diseases, early detection and treatment of chronic diseases. In addition to that the MOH has developed special programs targeting mothers, children, students, teens, old aged people, handicapped and technicians. A central information system was developed to ensure proper planning, follow up and evaluation of programs and activities from one hand, and empower human resources from the other hand[5].

There is a comprehensive health strategy, which needs revision and updating due to the political reforms under way in the country. The biggest change in policy is the withdrawal of the Ministry of Health from direct health care delivery. In Dubai, where a Dubai government health system has existed for more than 30 years, Abu Dhabi Emirate has established a health authority to delivery. Nevertheless, the relationship between the different health care providers and the Ministry of Health needs greater clarification and streamlining.

National health priorities as identified by the Ministry of Health

- Provision of quality, comprehensive, primary and specialized care to all residents of the United Arab Emirates;
- Increasing life expectancy by reducing mortality and morbidity rates;
- Elimination or reduction of the occurrence of infectious disease to minimal levels, especially childhood diseases targeted in the immunization programme, as well as other important diseases;
- Early detection and timely treatment of prevalent chronic diseases;
- Implementation of programmes targeting specific populations or ages, such as mothers, children below 5 years, schoolchildren, youth, in addition to the elderly and persons with special needs;
- Establishment of a standardized information and data management system for evaluation and planning purposes in addition to a programme for health human resources development and training in specialized technical institutions. 6

Formal policy and planning structures, and scope of responsibilities

The department of planning in Ministry of health is responsible for the development and formulation of national health policies before submitting them to the responsible authorities for final approval; this is undertaken in 4 phases as follows:

1. Reviewing all documents that pertain to population dynamics, disease trends and health care facilities.
2. 1st-Prioritization of prospective programs to include disease prevention and control, maternal and child health and care of the elderly.
3. 2nd-Undertaking studies on the cost of health care, acceleration of decision making process and health financing options.
4. 3rd-Development and preparation of the documents of the 10 year national health policies and strategies for the years 2002 to 2012

Key legal and other regulatory instruments and bodies: operation and any recent changes

Private licensing department is responsible for**:**

a. Licensing health institutions, doctors, Nurses and technicians.

b. Renewal of licensing for institutions, doctors, Nurses and technicians.

c. Investigating complaints and medical malpractice.

d. Inspection of health Institutions

e. Certifying medical reports and sick leaves.

f. Licensing of health advertisements.

g. Coordination with health institutions regarding continuing medical education.

5.2 Decentralization: Key characteristics of principal types

Decentralization is of long standing history, as the State is based on federalization with broad power sharing. Within the health system, the Ministry of Health looked at power sharing from the point of view of primary health care. The Primary Health Care Services Promotion Committee (PHCSPC) defined decentralization as the delegation of some powers and granting of some autonomy to the regions, with the insurance of supervision, follow-up and assessment by the central administration. A positive aspect of decentralization is the increase of quality health services and the augmentation of the satisfaction of the service beneficiaries. The administrative structure of the Ministry of Health, which includes the medical regions, might facilitate the decentralization process. This will require amendments to the legislation and laws, some of which are related to the Ministry of Health while others are outside the control of the Ministry of Health and pertain to other ministries. The technical and administrative potential and resources must also be available.

The Committee agreed that the delegation of power should include two aspects: 1) complete financial powers by giving the regions an approved federal budget; and 2) administrative powers including the power to choose and employ personnel. The central administration will be responsible only for the conclusion of contracts deducted from the regions' budgets.

Regionalization was defined by the PHCSPC as the old medical districts, which is an administratively defined region whose population varies between 25 000 and 600 000. There are currently nine districts (Articles 40 and 41 of the Organizational Chart of the Ministry of Health pursuant to Cabinet Resolution No. 11 of 1989). These districts enjoy some administrative and financial powers, whereas there are at least two levels of service: primary and secondary (specialized) care.6

5.3 Health Information Systems

Building and maintenance of the national health information system is a strategic objective to support and enhance the country cooperation strategy and all its strategic elements, including disease surveillance, trend analysis and burden of disease studies, health systems development, health and biomedical research, decentralization, privatization and public-private partnership, and health promotion and healthy lifestyles. The strategy recognizes that health care is increasingly becoming an information-driven service, and information is a major resource crucial to the health of individual citizens, the population in general, and to the success of any health care institution. Efforts and feasibility studies about digital infrastructure have been initiated. The planned system is moving towards digital formats to capture, record, retrieve, analyze and communicate data dynamically6.

5.4 Health Systems Research

5.5 Accountability Mechanisms

6 HEALTH CARE FINANCE AND EXPENDITURE

6.1 Health Expenditure Data and Trends

Table 6-1 Health Expenditure

Indicators	1990	1995	2000	2002	2004
Total health expenditure/capita (DH)	2527	2317	2535	2508	2450
Total health expenditure as % of GDP	3.6	3.6	3.2	3.5	2.7
Investment Expenditure on Health	-	-	-	-	-
Public sector % of total health expenditure	80.7	75.1	74.7	71.7	65.2

Source: Statistics section- Ministry of health 2005

Table 6-2 Sources of finance, by percent

Source	1990	1995	2001	2004
General Government				
Central Ministry of Finance				
State/Provincial Public Firms Funds				
Local				
Social Security			0	
Private			0	
Private Social Insurance				
Other Private Insurance			24.2	
Out of Pocket				
Non profit Institutions				
Private firms and corporations				
External sources (donors)				

Source:

Trends in financing sources

The Ministry of Health budget as a percentage of the Government budget has remained constant: 7.7% in 1982/1983, 7.6% 1996/1997, and 7.7% in 2001. The per capita share of the Ministry of Health budget is estimated as 0.6% of GDP (2002). The per capita expenditure on health reached US$ 767 in 2002.[6]

The 1999 Ministry of Health federal budget amounted to 1.44 billion dirhams (1 US Dollar = 3.68 Dirhams); 67 % of this budget pays the salaries and benefits of Ministry

staff; About 28 % is spent on General services, pharmaceuticals (180 million dirhams or 12 % of the total budget), treatment abroad of some 414 referrals (212 million dirhams or 3.5 %); 3.5 % is left for equipment. The federal health budget is actually spent at the tune of 91 % of the budgeted figures. The Federal health institutions are also supported by contributions from the local governments, primarily the local Government of the Abu Dhabi Emirate (515 million dirhams in 2001). Additional resources are spent on the health services of the Military by the Ministry of Defense budget; the oil companies have their own medical services for their staff and dependents; The Emirate of Dubai manages and operates its own hospitals and health centers; its budget was 900 million dirhams in 1999. The Crown Prince Courts of Abu Dhabi and Dubai cover the costs of treatment abroad of several thousand nationals (said to be as many as 6,000 patients per year).

In addition, the Private sector is financed by contributions by nationals and expatriates seeking their health services (estimated at 900 million dirhams in 1999). Health insurance companies have made their entry in the last few years as well; some of these companies are national companies, others are branches of international concerns.

The largest part of the budget specified for health goes to the second and third levels of the curative services, whereas little goes to the preventive and the primary health care services, with growing patient expectations, health transitions and increase in price of medical services and medicine.

6.2 Tax-based Financing

Levels of contribution, trends, population coverage, entitlement

Health services are financed from six distinct sources. The Ministry of Health contribution has been noted above. Funds earmarked for capital expenditures are granted to the Ministry of Public Works. MPW contracts out the design, construction and supervision to private firms. Only minor works are undertaken by the MPW. Funds for the Dubai Department of Health and Medical services are funded by the resources of the Emirate of Dubai.

The Emirate of Abu Dhabi supports the medical services directly; such funds are not consolidated within the federal budget. Staff are hired, supplies are directly purchased, buildings are completed directly. Thus two cadres and two systems operate within the same facilities. Tawam Hospital as well as the company-managed hospitals such as the Corniche hospital have yet a third cadre, salary scale and benefits for staff.

Private medical care represents the sixth source of funding, in addition to the Police, the Armed Forces, the oil companies and the diwans of the rulers. Unconfirmed information places the outlays at 900 million dirhams per year in 1999.

On April 4 1998, the MOH announced that it has collected 429,846,105 dirhams: 209,689,582 from District I (Abu Dhabi, Al Ain, Western Region) and 210,156,523 from District 2 (Northern Emirates). This collection comes from fees on medical fitness reports, medical licenses, pharmaceutical companies fees. This sum is expected to be far larger in 1999 since it was only collected in the last few months of 1997

The budget of the Ministry of Health in 1999 for Pharmaceuticals and medical supplies has been estimated at 180,000,000 Dhms of which 134 million dirhams have been earmarked for the joint purchasing program of the Arabian Gulf States. Dental supplies account for 9,750 million dirhams, 6,602 million for radiological films, 5 million Dirhams

for chemical supplies, and 26 million dirhams for other medical supplies such as antiseptics, plastic containers, suture materials, syringes etc. The budget proposal also reports that consumables for every open heart surgery operation costs 13,000 Dhms, excluding the cost of the valve prosthesis that costs on the average 6,000 dirhams.

Planned changes

The Ministry of Health is currently considering seriously the introduction of compulsory medical insurance for all residents. Residents will be required to carry either a public or a private medical insurance. All expatriates applying for a medical fitness certificate, that is a prerequisite for securing a residency permit, will need to demonstrate that they do carry a medical insurance. There is currently consideration for the establishment of a supreme Authority for Medical Insurance in the UAE.

Key issues and concerns

Financing the health services presents its own set of problems. Like all countries that have essentially a publicly-financed health care system, the MOH has to compete with any and all other sectors for federal money. With the increase in public spending, the decrease in state revenues, the rapid escalation in the cost of health care and the increase in the number of people it serves, the money allocated by the federal budget is always going to remain less than what is expected and wished. The mere availability of the supply generates the demand for medical services. Furthermore, there are few if any barriers to health care: there is no financial toll, little queuing, no problems with accessibility and little social inconvenience.

Health officials have to-date relied on additional money to be provided by the local government to complement the federal budget. The sum has grown to be quite substantial, yet more is needed and will continue to be required.

6.3 Insurance

The UAE Government provides its nationals with a health care system administered by its Federal Ministry of Health. For expatriates (non-UAE nationals), which currently comprise 80% of the population a payment of Dhs 300 (USD 82) per year is required to obtain a health card which entitles the holder to access to medical services at all MOH facilities for minimal fees. The health card and/or medical insurance is a mandatory requirement for each expatriate and without it expatriate workers will not get a work permit in the UAE. In the past, even temporary visitors to the UAE were also able to get relatively free health services during their stay in the UAE. These costs comprise of approximately 80% of the MOH budget.

MOH officials confirm that although the Ministry collects approximately 500 million dirhams annually in medical fees it spends five times more this amount on medical services. The MOH also believes that medical services and medicine is being misused. Even people on visit and transit visas go to government hospitals and undergo complicated surgery almost free of charge which would cost them Dhs 50,000 to Dhs 250,000 in private hospitals elsewhere.

In lieu of the above and to ease its burden, the MOH announced two new policy decisions relating to the revision of medical charges in government hospitals, clinics or health centers as well as the dispense of medical prescriptions to patients. The first, which took effect on May 1, 2001 states that government clinics will no longer provide fee medicines to expatriate cardholders, but they will have to purchase them from

private pharmacies. The second, effective from April 1, 2001 states that visitors to the UAE and residents without health cards or with expired ones, have to pay full fees for hospital beds and surgical operations.

These policy changes actually point towards greater involvement of the private sector in health care and saving the government millions of dirhams. The MOH is planning, in coordination with other authorities, to ensure all expatriates have medical insurance in the future, whether through private insurance schemes or through employers. In fact, in 1999 the MOH did call for proposals for a comprehensive insurance plan from local health insurers and international consultants were asked to review the proposals and submit a detailed blueprint, but proposals did not match the Ministry's expectations, since the insurance companies offer was to collect full insurance premiums while reimbursing the government for its expenses at the current subsidized rates. This reiterates the fact that the private sector health care providers should be and will be involved as a substitute.[7]

Table 6-3 Population coverage by source

Source of Coverage	1990	1995	2000	2002
Social Insurance	-	-	-	-
Other Private Insurance	-	-	-	-
Out of Pocket	-	-	-	-
Private firms and corporations	-	-	-	-
Government	-	-	--	-
Uninsured/Uncovered	-	-	-	-

Trends in insurance coverage

The United Arab Emirates' medical insurance market is quite a standardized sector in which most players offer virtually the same range of services (policies) with minor differences in the terms and conditions. According to research performed, demand for insurance has grown significantly in recent years and continues to do so. One reason for this increase is the fact that the local government has begun to charge expatriates for the provision of some healthcare services (e.g. x-rays, laboratory tests, MRI's, medicines) which obviously increases the benefits of having medical coverage. Another principal reason for individuals purchasing insurance is that they are not satisfied with the level of service provided by public hospitals and so consider having insurance as a crucial guarantee for possible future predicaments.

However, corporations tend to have a more organized approach towards medical insurance. The larger ones require employees to have insurance. Insurance companies, and brokers alike, tend to target corporations for this reason and of course, due to the sheer size of the policy attainable.

In addition to health services provided in the UAE, there is a substantial flow of patients to academic medical centers abroad. The care of nationals is predominantly supported by the Crown Prince Court of Abu Dhabi and Dubai, as well as by the Ministry of Health and the DDHMS (although to a far smaller scale). Patients leave for treatment in Egypt, India, Germany, the United Kingdom, and more and more recently to the United States. The Ministry of Health reported that 414 patients were sent abroad for treatment at ministry expense. Unconfirmed information however reports that the Crown Prince Court

of Abu Dhabi has supported the treatment abroad of some 3,600 patients, mainly in the USA! The Ministry of health has disbursed 19 million dirham in 1999 for the treatment of its patients; it is estimated however that in excess of 100-150 million $ in spent by the CPC of Abu Dhabi per year.

Patients who are sent for treatment abroad are predominantly nationals. The costs incurred include the cost of medical care as well as travel, accommodation and generous living expenses for the patient and one or more of his/her relatives.

Health insurance companies are likely to increase and widen the scope of their operations. Arrangements, much like managed care programmes and health maintenance organizations are apparently imminent, with some association and affiliation with medical centers abroad (regional and international) as well. This may well serve to promote cost sharing, particularly if the employers and employees were to contribute to the premium.

Private insurance programs: trends, eligibility, benefits, contributions

One aspect of this market which does not appear to be standardized is whether the insurance companies have associations with particular hospitals or clinics. In the case of the insurer providing a listed network of facilities, each one on the list will normally have been visited by the insurer, evaluated for quality and scope of services and treatment rates and, in some cases, special arrangements and tariffs may have been agreed upon whereby the medical facility offers reduced rates to the insured patient.

Both group and individual policies are available from insurers and all insurance providers contacted were found to offer discounted premiums as an integral part of group (corporate) policies. Most companies offer policies that cover treatment abroad if the policy holder needs emergency attention whilst already out of the country; however there are some policies which restrict this to certain regions or exclude coverage in North America, for example. Similarly, if the patient is in the UAE but the treatment required is not available locally then international treatment may be covered: this is case specific. There are also exclusive policies offered by some insurance companies which are by no means standard and may allow for global coverage at much higher premiums.

As well as the geographical restrictions of insurance policies, there are also treatment exclusions that are often standard or may be company specific. Exclusions which are found to exist in the mainstream (at least in the UAE) are, for example: pre-existing conditions, AIDS related sicknesses, cosmetic surgery (other than re-constructive), routine medical check-ups, congenital and hereditary conditions, dental treatment, pregnancy and maternity and lastly, eye care. However some of these exclusions (e.g. dental, optical and maternity) can be covered by insurance through additional agreements that will incur additional premiums being paid by the policy holder. Despite the availability of international treatment, due primarily to the strict conditions that apply and secondly to the fact that the majority of conditions can be treated locally, a maximum of about 10% of claimants have actually requested or received treatment abroad.

6.4 Out-of-Pocket Payments

(Direct Payments) Public sector formal user fees: scope, scale, issues and concerns

Care in the government health facilities was free of cost to patients until 1993 when a health card system was introduced. All patients are now required to possess a health card in order to access the government health care system. Expatriates are required to pay a yearly registration fee of 300 dirhams per adult, 100-200 dirhams per child (according to age), for a card that entitles the holder to access the medical services. Additional payment has been introduced to visits, medicines, laboratory and radiological investigations. As of May 2001, expatriates have been required to pay for medicines. Nationals access the services for a fee of 100 dirhams every four years (25-50 dirhams per child) and no additional copayment. Revenues from health cards amounted to 118 million dirhams in 2001, down from 137 millions in the year 2000.

6.5 External Sources of Finance

6.6 Provider Payment Mechanisms

Hospital payment: methods and any recent changes; consequences and current key issues/concerns

Regarding payment for services received by insured persons, there are two prime methods: the first being “direct billing” whereby the patient will present either a card from their insurer or will inform the hospital of their insurance details whereupon the charges will be directly incurred by the insurance company. The second method works on a “reimbursement” basis whereby initially the patient pays for the treatment and is then reimbursed by his/her insurance company. In both cases the insurance company will need to verify that the treatment received is covered by the insurance policy and that the charges imposed are customary i.e. are not excessive in comparison with average local rates.

Payment to health care personnel: methods and any recent changes; consequences and current issues/concerns

Health care is labour-intensive and labour-sensitive. The quality of the staff is essentially what differentiates the service provided and the quality received. The process of change in a health care system is the basic client-provider relationship. It is this relationship that determines the outcome. This one-to-one relationship has an immense impact which is independent of the facility and the technology (these are structure and environmental factors in the health care system).

Having noted the above, under the current system, based on the Civil Service Commission, the emoluments paid to physicians and nurses are generally not attractive enough to interest American- and European-trained professionals in large numbers, or in numbers large enough to maintain a "critical mass" of professionals capable of inducing

and sustaining improvement. However, the selection committees are flooded with candidates seeking employment in the UAE, some of whom will even accept grades and positions inferior to the grades they are entitled to by law. Thus, there is a large supply of professionals available and the Civil Service and/or the Ministry of Finance see no reason to revise the current salary structure. This structure has not been revised since 1979, despite the yearly increase in the cost of living and rates of inflation since then.

With time, health professionals, who may have been full of zest initially, become disillusioned because no incentives have been offered. Their professional growth may also have been stemmed because they have not had the opportunity to go to American and European health facilities and practise at these institutions (due to licence restrictions). Programmes of continuing education have been episodic and often unplanned. The quality of care offered by the physicians, nurses and technicians is thus bound to deteriorate with time. Morale sags as well. This climate does not encourage the recruitment of much needed new professionals who are concerned with maintaining their professional growth and updating their skills and knowledge. Such professionals merely accept to come for short visits and consultations. [8]

7 HUMAN RESOURCES

7.1 Human resources availability and creation

Table 7-1 Health care personnel

Personnel per 100 000 pop	1994	1995	2000	2002
Physicians	1.65	1.68	1.78	1.69
Dentists	0.19	0.27	0.28	0.29
Pharmacists		0.46	0.45	0.41
Nurses midwives	3.56	3.20	3.30	3.52
Paramedical staff (other HCPs)				
Community Health Workers	-	-	-	-
Others	-	-	-	-

Source: [a]Eastern Mediterranean Regional Office Database: reports from member states

Trends in skill mix, turnover and distribution and key current human resource issues and concerns

The number of medical doctors reached 2304 in the public sector, with an average of 1 doctor for every 1629 people and 1 nurse for every 650 people. Technical and administrative resources are represented by 12 100 people nationwide.

The number of physicians reached 2304, nursing staff 5779 and technicians 12 100 in 2002. Specialists increased from about 31% of total physicians in 1990, to 37% in 2002, which shows the inclination towards appointment of specialists and consultants at the expense of practitioners and family physicians.

Despite the fact that a remarkable increase took place in the number of workers in the Ministry of Health, there is still a shortage in availability of trained local physicians and nurses. There is need for qualified and well trained human resources. Most doctors and nurses, as well as technicians, are not nationals. A sizeable proportion of national personnel working in the health field are engaged in administrative duties. Innovative ways and means need to be found to increase the number of nationals in the health sector. Employment is difficult and the official rules and regulations are lengthy even when a vacancy is available: training programmes are not persistent and lack the necessary funds; career development activities are uncoordinated and ad hoc; and there is no systematic performance appraisal.

Nursing Human Resources by Specialty in Medical Districts

Districts	Hospitals	PHC	Prev.Med	S H	Dental	MCH	FDON	Total
Abu Dhabi	1406	188	18	90	26	11	14	1753
Al Ain	1318	190	307	65	0	0	0	1640
Dubai	253	23	17	81	11	0	3	388
Sharjah	869	65	14	70	0	13	0	1031

Ajman	206	27	2	32	0	6	0	273
RAK	468	64	0	40	0	0	0	572
Fujairah	294	22	0	27	0	0	0	343
UAQ	131	13	7	26	0	0	0	177
Westren	246	0	0	0	0	0	0	246
Total	5191	592	95	461	37	30	17	6423

Source: Ministry of health

There has been urgent need for the development of health manpower working for the ministry of health especially UAE nationals. The ministry has therefore given priority to establishing a system for continuing education and training of health professionals in various disciplines.

One of the major achievements in this respect was the establishment of five nursing institutes that apply an advanced system for the training of nurses . The number of national nurses graduated from these institutes increased from 32 national nurses in 1989 to 155 in the year 2001. The number currently enrolled of nursing students is 820 of whom 207 are UAE nationals. As for physicians , the ministry recruits all national graduates of medical schools in the country and abroad. The number of these graduates is expected to reach 114 physicians in the next academic year.

Table 7-2 Human Resource Training Institutions for Health

	Current		Planned		
Type of Institution*	**Number of Institutions**	***Capacity**	**Number of Institutions**	**Capacity**	**Target Year**
Medical Schools					
Schools of Dentistry					
Schools of Pharmacy					
Nursing Schools (high)					
Midwifery Schools					
Paramedical Training Institutes					
Schools of Public Health					

Source:

7.2 Human resources policy and reforms over last 10 years

8 HEALTH SERVICE DELIVERY

8.1 Service Delivery Data for Health services

Table 8-1 Service Delivery Data and Trends

TOTAL (percentages)	1990	1995	2000	2004
Population with access to health services	90	98	100	100
Married women (15-49) using contraceptives	-	28	-	-
Pregnant women attended by trained personnel	76	95	99	99
Deliveries attended by trained personnel	-	87	98.7	99.9
Infants attended by trained personnel (doctor/nurse/midwife)	95	94	99	99
Infants immunized with BCG	96.6	97.6	80.3	91.9
Infants immunized with DPT3	74.4	88.5	73.6	81.5
Infants immunized with Hepatitis B3	-	79.9	70.4	70.3
Infants fully immunized (measles)	66.1	79.4	70.3	84.1
Population with access to safe drinking water	98	97	100	100
Population with adequate excreta disposal facilities	95	99	100	100

Source: * UNICEF/UNPOP
Statistics section- Ministry of health 2005

URBAN (percentages)	1990	1995	2000	2002
Population with access to health services	-	-	-	-
Married women (15-49) using contraceptives	-	-	-	-
Pregnant women attended by trained personnel	-	-	-	-
Deliveries attended by trained personnel	-	-	-	-
Infants attended by trained personnel	-	-	-	-
Infants immunized with BCG	-	-	-	-
Infants immunized with DPT3	-	-	-	-
Infants immunized with Hepatitis B3	-	-	-	-
Infants fully immunized (measles)	-	-	-	-
Population with access to safe drinking water	-	-	-	-
Population with adequate excreta disposal facilities	-	-	-	-

Source:

RURAL (percentages)	1990	1995	2000	2002
Population with access to health services	-	-	-	-
Married women (15-49) using contraceptives	-	-	-	-
Pregnant women attended by trained personnel	-	-	-	-
Deliveries attended by trained personnel	-	-	-	-
Infants attended by trained personnel	-	-	-	-
Infants immunized with BCG	-	-	-	-
Infants immunized with DPT3	-	-	-	-
Infants immunized with Hepatitis B3	-	-	-	-
Infants fully immunized (measles)	-	-	-	-
Population with access to safe drinking water	-	-	-	-
Population with adequate excreta disposal facilities	-	-	-	-

Source:

8.2 Package of Services for Health Care

8.3 Primary Health Care

Primary health care services are provided by the Government through purpose-built primary health care centers, hospital outpatient and emergency room facilities, in addition to maternal and child health clinics, school health and dental clinics and units. Primary health care centers are not adequately integrated neither clinically nor organizationally with the inpatient facilities, resulting in low quality of care, poor patient continuity, substantial patient dissatisfaction and over-crowding of hospital outpatient facilities, according to the World Bank mission report of 1997. Most of the PHC in the UAE do not have the basic ancillary and diagnostic services needed to function adequately (such as laboratories, radiology, etc). Moreover the Ministry of health restricts the PHC physician'' prescribing authority thereby forcing patients to have their prescriptions renewed every three days! This does not apply to physicians working in the hospital outpatient facilities. This has prompted patients to seek hospital admissions (often unnecessary) in order to speed up the investigation. This has also resulted in a further decrease in the confidence of the public in PHC and its staff.

Hospital outpatient facilities have contributed markedly to the patient dissatisfaction with the governmental medical services. Restricted hours of operation, lack of appointment system, crowding have all sapped the confidence in the system. Hospital outpatient facilities are available for only six hours per day, five days a week. Physicians see patients over a period of 3-4 hours. The flow of traffic is poor; patients and staff are overwhelmed and disgruntled, although the staff works for only few hours a day.

Infrastructure for Primary Health Care

Primary Health Care is considered the first contact for the provision of comprehensive health services to the community. The UAE was one of the first countries that adopted PHC after signing the Alma Ata declaration and started introducing the service in 1984 . Health centers gradually replaced clinics to provide basic medical care in addition to dental care . Other services such as maternal and child health including antenatal care , vaccination , nutrition education are also provided . The number of health centers increased gradually to reach 106 centers by the year 2000 distributed between urban and rural areas, in a proportion of 33% (35 centers) and 67% (71 centers), respectively distributed in all medical districts. The Ministry of Health provides an average of one centre for every 35 415 of the population. Also, the Ministry of Health provides nationwide 11 centers for school health, which supervise 642 clinics in schools, 9 centers for preventive medicine, and 10 centers for maternity and child care. In addition, the Ministry of Health provides 92 dental clinics nationwide.

District	Centers	physicians	Nurses
Abu Dhabi	21	128	173
Western	8	15	22
Al Ain	20	93	164
Dubai	9	33	42
Sharjah	14	35	43
Ajman	6	25	30
UAQ	5	11	12
RAK	16	55	59
Fujairah	7	7	14
Total	**106**	**402**	**559**

The Ministry of Health, with comprehensive coverage to all the population, is extending its services to small communities scattered around the major settlements. The major areas of strategy in this sector are revision of the family care system, accreditation and strengthening the referral system.

Public/private, modern/traditional balance of provision

Public-private ownership mix;

The Primary Health Care System is mostly government run.

Public Sector:

Primary care delivery settings and principal providers of services; new models of provision over last 10 years

Thirty years ago, herbal remedies that were meted out by unqualified and untrained healers (these remedies were passed from father to son as a part of the cultural heritage) were the only option that was available to patients. Patients desiring a higher level of healthcare were compelled to travel to India, Lebanon or Egypt to obtain treatment. This led to the prevalence of epidemics such as cholera, leprosy, small pox, and other infectious diseases. It also resulted in very high mortality rates for mothers and infants.

In contrast to the above, the number of hospitals has increased from seven hospitals in 1971 to 57 well-equipped private and public hospitals containing 6,890 beds in 1999. The number of clinics and health centers has increased from twenty-one to

approximately one hundred and twenty (public) within the same period of time. This has led to a sharp decline in the prevalence of infectious diseases.

This tremendous progress is further highlighted by the fact that the World Health Organization (WHO) includes the UAE among the nations that have exceeded the goals set by "Health for All by the Year 2000." According to the 1998 World Health Report issued by the WHO, attaining this goal involves meeting the following objectives:

- achieving a life expectancy of approximately sixty years of age;
- achieving an infant mortality rate that is below fifty per one thousand live births; and
- achieving a mortality rate that is below seventy per one thousand live births for infants under five years of age.

The decline in the prevalence of infectious diseases is due to the rapid development in the quality of the preventive services that are provided to the population.

8.4 Non personal Services: Preventive/Promotive Care

Availability, accessibility and Affordability:

PUBLIC HEALTH PROGRAMS

The Department of Preventive Medicine at the Ministry of Health has established the following disease prevention programs:

- National Immunization
- Disease Prevention and Control
- Malaria Control
- National AIDS Control
- Non-communicable Diseases
- National Health
- Zoonotic Diseases

Each of the programs listed above is discussed in greater detail in the paragraphs below. Information pertaining to disease prevention programs has been obtained from the UAE Health Directory 1998 - 1999, a publication that is issued by the Ministry of Health.

1. National Immunization Program

The objective of the National Immunization Program is to prevent the occurrence of Tuberculosis, Poliomyelitis, Measles, Diphtheria, Tetanus, Whooping Cough, Mumps, Rubella, and Hepatitis B. The program was initiated in 1975 when the UAE adopted the WHO and UNICEF resolutions pertaining to the immunization of children against childhood diseases.

This program has been successful as a result of efforts such as the provision of free vaccines and the encouragement of physicians in the private sector as well as those in the public sector to contribute their services to immunize children. The implementation of the program has resulted in the immunization of more than ninety percent of children under two years of age.

2. Disease Prevention and Control Program

This program is targeted mainly at domestic servants, nannies, food handlers, hairdressers, drivers, farmers, craftsmen, and employees. It is aimed at controlling the incidence of communicable diseases in accordance with Federal Law no. 27. Communicable diseases, as defined by the disease prevention and control program, include zoonotic diseases, tuberculosis, AIDS, Salmonellosis, intestinal worms, hepatitis B, and infectious dermatitis. The activities undertaken under the disease prevention and control program include the investigation of each instance of the occurrence of an infectious disease, reporting the occurrence of the disease, the provision of treatment, isolation of the patient, and the provision of chemical disinfection. Health education and the monitoring and immunization of carriers also form an integral part of the disease prevention and control program.

The implementation of the program has resulted in a reduction in the incidence of communicable diseases. The occurrence of typhoid has declined from 3.11 cases per 100,000 individuals in 1986 to 1.10 cases out of a total of 100,000 individuals. Meningitis, on the other hand, has decreased from 11.3 cases per 100,000 individuals in 1986 to 5.6 per 100,000, a significant decrease of approximately fifty percent. The range of the population that is targeted by the program is quite wide. Up to 700,000 patients are normally examined for infectious diseases. Out of these, an average of 744 cases usually reveal the presence of disease.

3. Malaria Control Program

As its name implies, this program is dedicated to curtailing the spread of malaria within the UAE. The malaria control program was started in 1972 and was later reorganized (in 1976) with the assistance of WHO. The reorganization process was aimed at controlling what was termed man-made malaria. This was caused by the expansion in agricultural activities that led to the expansion of water resources and surfaces.

The reorganization process involved the following activities:

- Stopping the multiplication of vectors by the drying up water surfaces and the elimination of swamps.
- Elimination of adult vectors through the use of insecticides and the breeding of fish that feed on the larvae of vectors.
- Treatment of cases of malaria, with particular emphasis on those that are resistant to chloroquine.
- Performance of epidemiological surveys to establish the sources of the disease.

The effectiveness of the malaria control activities may be assessed by the fact that the number of cases of malaria dropped from a rate of 57 cases per 1,000 individuals in 1976 to a rate of 1.64 cases per 1,000 individuals in 1994.

In order to eliminate or minimize the spread of malaria along the border of the UAE and the Sultanate of Oman, the ministries of health of both countries have joined efforts to control the malaria vectors that are present along their borders. In an effort to prevent the resurgence of malaria, the Ministry of Health has established and maintains close contact with the medical community both within the UAE and abroad.

According to the Ministry of Health, all cities of the UAE are free from locally transmitted malaria, with the exception of the highlands of the Eastern Emirates. A further indication of the effectiveness of the malaria control program in controlling the spread of malaria nationally is the fact that 95% of all reported cases of malaria are brought into the country from overseas.

4. National AIDS Control Program

The National AIDS Control Program has been in effect since September 1984. It is dedicated to stopping the spread of AIDS in the following manner:

- controlling blood transfusions;
- controlling the donation of organs;
- controlling the inflow of labor into the country; and
- ensuring early detection of HIV positive cases (through HIV testing) among the following high risk groups:
  - blood donors;
  - those applying for work and residency permits in the UAE;
  - inpatients in all hospitals;
  - pregnant women;
  - prisoners, drug users, and those admitted to drug rehabilitation centers; and
  - patients attending clinics for the treatment of sexually transmitted diseases.

This program is regulated by Ministerial Resolutions number 502, 504, and 506. It is further supported by Cabinet Resolution number 139 which has added AIDS to the list of diseases that endanger public health. The program has affiliated committees in all medical districts. It is a highly effective program that focuses on health education for the community.

5. Non-communicable Diseases Program

This program is still in its initial stages. It has been initiated as a result of the increase in the level of non-communicable diseases in the UAE. This increase is a result of changes in the standard of living.

The program is composed of four stages devised by the Central Department for Disease Control. It is still at the first stage which involves the assessment of the size of the problem. The assessment is being conducted by the departments of Preventive Medicine in all of the medical districts.

6. Occupational Health Program

As its name implies, this program is dedicated to ensuring the safety of employees in the workplace. More specifically, the program is aimed at providing a safe environment for employees which involves an assessment of their occupational safety, early detection of potential health and safety hazards, and the compilation of a database on all of the occupational diseases by work activity in the UAE.

The goals listed above will be achieved by:

- conducting periodic inspections of the safety measures that are currently enforced in various industries and assessing the safety of the workers;
- providing training to workers involved with occupational health and safety;
- defining the levels of pollutants (such as dust, for example) that are permissible;
- screening workers for any diseases caused by working conditions and treating all cases in which the illness is detected in centres specializing in the treatment of those diseases;

- conducting studies on issues related to occupational health and safety in various industries;
- identifying potential health hazards in the workplace in co-operation with the Ministry of Labour;
- defining occupational health standards that must be implemented by both the private and public sectors;
- joining forces with the Ministry of Labour, petroleum companies, municipalities and other relevant entities to educate employees on occupational health standards;
- conducting studies focused on occupational health problems in conjunction with the University of the UAE;
- revising existing occupational health laws and regulations to ensure that they conform to economic and social developments;
- defining the occupational health services that will be provided by various organizations including but not limited to the Ministry of Health and other ministries; and
- developing a computer information system dedicated to occupational health and related issues.

7. Zoonotic Diseases Program

Zoonotic diseases are mentioned in Federal Law no. 27 (1981). They are diseases that are transmitted from animals to humans. Three zoonotic diseases in particular warrant special attention: brucellosis (also known as Malta Fever), rabies, and viral hemorrhagic fevers.

The goals that must be met by any program that is dedicated to the control and elimination of zoonotic diseases are:

- the formation of a preventive health panel that is aimed at controlling communicable zoonotic diseases;
- the eradication of brucellosis from sheep, lambs, camels, and cattle;
- the provision of training to employees in the control and elimination of zoonotic diseases;
- education of farmers with regard to the economic effectiveness of the program; and
- promotion of the vaccination of workers who are at risk of contracting zoonotic diseases.

The program is implemented in the following manner:

- by conducting complete medical checkups of all of the animals that are located in the geographic area that is targeted for the elimination of zoonotic diseases;
- by isolating sick animals, slaughtering them, and incinerating the bodies;
- by ensuring that sick animals are not allowed to enter areas from which diseases have been eliminated;
- by issuing medical certificates indicating that the animals that are being imported are free from any zoonotic diseases; and
- by establishing a system designed to control zoonotic diseases and to track the movements of wild animals and carriers of such diseases.

Organization of preventive care services for individuals

The ministry of health paid special attention in recent years to preventive and promotive health by developing strategies and programs directed to mothers, under –five as well as school children and other population groups at special risk of certain health problems. Special programs have also been developed to cater for the prevention and control of infectious diseases in general and imported diseases and occupational health problems in particular. Health education is also given special attention to raise awareness and promote healthy behavior among the public.

Infectious diseases are included in the control programs such as childhood diseases, zoonotic diseases and diseases that pose special risk such as meningitis, viral hepatitis and tuberculosis. Programs are jointly organized with other relevant agencies and ministries in UAE to mobilize and implement suitable intervention methods as required and according to specific problems such as vaccination, vector control, health education and chemoprophylaxis. The adoption of these programs has been reflected positively on health indicators and thus proved successful in reducing and / or eliminating target diseases. The elimination of polio, measles and neonatal tetanus are good examples to illustrate such success. Regulations adopted to prevent the introduction of certain imported diseases into the country have also proved effective. The best examples in this respect are HIV / AIDS, viral hepatitis B and Tuberculosis. Recent coordinated action to curb vector – transmitted zoonotic diseases was another example that confirms the effectiveness of coordination of the efforts of all concerned parties concerned with the prevention and control of communicable diseases

The Malaria Control Program has succeeded in eliminating local transmission of the disease. No indigeous cases have been reported in the last few years and WHO is in the process of announcing the UAE free of malaria in 2002.

Environmental health

The rapid growth and urbanization of the United Arab Emirates is leading to environmental degradation and negative impacts on the health of the people. Rapid growth is causing air quality to become poor in the large cities due to motor vehicles and industrial emissions. The health impact can be seen by the fact that the incidence of respiratory diseases has increased in the past 10 years. There is a need for community-based initiatives for integrated development programmes, such as Healthy cities and the Healthy Environment for Children Alliance, as well as the need to strengthen the district health system and legislation.

Health education / promotion, and key current themes

The ministry of Health has paid special attention to health education as an effective method for changing unfavorable attitudes and behavior that would negatively influence the health and well-being of individuals and the community at large. To meet this challenge, the ministry established a department of health education under the preventive health sector with representation in all medical districts. The departments' responsibility is to develop national plans to raise the awareness of the public on all matters pertaining to their health and well- being. The implementation of these plans in the form of programs and specific activities is supervised by the department.

The health education component of all prevention and control measures is multifaceted, targeting different groups of the population including different methodologies (conferences, courses, lectures and workshops, national awareness weeks e.g. Cancer National Awareness Week, outreach activities, sporting events, publications and media

use). It is important to note that there is no reference centre for health education in the community nor a radio and television production unit which broadcasts awareness programmes via the various media channels. Because of the diversity of nationalities and languages public communication is a challenge.

Although health education has been recognized as an essential element to support health care services, it still lacks proper definition of why, where, what, how and who. Although isolated and uncoordinated activities for utilization of health education exist, there is no attempt at joining forces in a well studied programme. The information and telecommunication infrastructure in health care institutions is weak.

8.5 Secondary/Tertiary Care

According to the Annual Statistical Report 2002, the United Arab Emirates has 15 hospitals in urban areas, which represents 57.7% of the total number of hospitals in the country, and 11 hospitals in rural areas, which represents 42.3% of the total hospitals in the country. The number of beds in non-private hospitals reached 4100 in 2002. It is estimated that there is one bed for every 915 people. The average bed occupancy rate for hospitals ranges from 57% to 90%.

Almost all levels of health services are decentralized. All hospitals are either managed by medical districts or independent authorities. With rapid changes, the management of the system poses some difficulties to be addressed by the Ministry of Health.

Table 8-2 Inpatient use and performance

	1990	1995	2000	2002	2004
Hospital Beds/1,000	3.1	2.7	2.3	2.1	2.0
Admissions/1000	115	107	101	96	81
Average LOS (days)					
Occupancy Rate (%)				57-90%	

Source: Statistics section- Ministry of health 2005

8.6 Long-Term Care

8.7 Pharmaceuticals

The Pharmacy and supplies includes a number of departments and sections that deal with different functions of this important sector. These departments and sections work in harmony to provide all MOH institutions with their needs of pharmaceuticals and drugs after ensuring that such products are safe and superior quality and safe. The department is electronically connected to the MOH stores, hospitals and clinics for an accurate and continuous monitoring of medicines and other supplies

Essential drugs list: by level of care

There is a drug formulary by level of care is issued by the Ministry of Health, By generic name, there are 281 medications for PHC, 831 medications for Hospitals in addition to 9 types of approved vaccinations in the formulary.

Manufacture of Medicines and Vaccines

Thirteen Pharmaceutical manufacturers are listed as approved in the MOH website and licenses for another three are pending.

Regulatory Authority: Systems for Registration, Licensing, Surveillance, quality control, pricing

The Department of pharmaceutical control includes 3 sections:

Technical affairs: This section is responsible for reviewing technical specifications of all pharmaceutical products used in UAE and their registration and pricing. It also reviews all manufacturing companies to ensure compliance of their products with national standards. The section is also responsible for issuance of licenses and supervision of local manufacturers of pharmaceutical products.

Local Pharmacies Supervision Section: This section issues licenses to local pharmacies and drug stores and supervises workers in these facilities. The section is also responsible for supervising the examinations of professionals responsible for these facilities, as well as preparing laws and regulations that regulate the private pharmaceutical sectors' activities and raises such laws to the responsible authorities for approval.

Supervision and quality assurance section: This section undertakes the examination of all imported pharmaceutical products to ensure safety and compliance with local specifications and standards. The examination is also applied to randomly selected samples from local pharmacies.

Systems for procurement, supply, distribution

Department of Supplies and Stores: This department is responsible for preparing the specifications and quantities of drugs and other pharmaceutical supplies needed by the ministry and follow-up international, gulf and local tenders. The department also monitors available supplies closely to ensure that no shortages of any item occur and that all items are received on timely basis.

A number of sections carry out the functions of the department. They include sections such as receipt and distribution of supplies and records, and registries. Information is kept under a secure electronic system and provided instantly to all related departments and outlets. There is a listing of 124 approved pharmacies in the UAE.

8.8 Technology

The central department of radiology summarizes diagnostic and therapeutic radiology services in UAE to ensure compliance to natural standards. The department develops these standards and provides advice on the specifications of equipment used in this field. The department is also responsible for evaluating technical radiology candidates through examination before they are licensed to work in both public and private sector. The department formed four committees to undertake the responsibility of developing the

strategic plans for radiology practice in the UAE. There are 3 units under the department, which are:

A- Continuing training unit: This unit prepared a program for manpower development which made it compulsory for all radiology technicians to attend at least 15 hours of training. It also registered 50 technicians in the American University for training in advanced radiological technology.

B- Administrative development unit: This unit evaluates the performance of radiology sections through field visits. It also prepares a database with complete information on all radiology equipment used in the country.

C- Radiological and nuclear protection unit: which established a database on equipment in collaboration with UNDP. The department is now preparing for the introduction of Tele-Radiology service to all hospitals. It is also preparing guidelines for radiology equipment in cooperation with the department of supplies.

9 HEALTH SYSTEM REFORMS

9.1 Summary of Recent and planned reforms

10 REFERENCES

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The Regional Health Systems Observatory is an undertaking of the WHO Regional Office for the Eastern Mediterranean. The Observatory supports and promotes evidence-based health policy-making through comprehensive and rigorous analysis of the dynamics of health systems in the EMR. Its primary goal is to contribute to the improvement of health system performance and outcomes, in terms of better health, fair financing and responsiveness of health systems. The aim of this initiative is to provide relevant comparative information to support policy-makers and analysts in the development of health systems and to serve as repository of information on health systems.

This document is part of a series of in-depth health systems profiles, produced and updated by the Observatory using standardized approach that allows comparison across countries. They provide facts, figures and analysis and highlight reform initiatives in progress.

World Health Organization

Regional Office for the Eastern Mediterranean
Abdel Razek El Sanhouri Street,
PO Box 7608, Nasr City, Cairo 11371, Egypt
Phone: +202-6702535, Fax: +202-6702492
URL: www.emro.who.int